CLAIM AMENDMENTS

1-74. (canceled)

75. (previously presented): A component designed to serve as an electrolyte in a fuel cell, which component comprises

a metal or metal hydride support, wherein

one or both faces of said support is coated with an electronically-insulating proton-conducting coating, which coating consists of an inorganic material that contains no liquid phase, said coating having a thickness such that the area-specific resistance for protons is in the range of 0.01-100 $\Omega.cm^2$ at at least one temperature between 220°C and 550°C.

76. (previously presented): The component of claim 75, wherein the metal or the metal contained in the metal hydride is palladium, titanium, silver, copper, vanadium, lanthanum, nickel, iron, chromium or alloys thereof.

77. (previously presented): The component of claim 76, wherein the metal or metal in the metal hydride is selected from the group consisting of Pd, PdAg, PdCu, Ti, $LaNi_5$, TiFe and CrV_2, V/Ni/Ti, V/Ni and V/Ti.

78. (previously presented): The component of claim 75, wherein the EIPC coating is selected from the group consisting of:

mesoporous zirconium phosphate pyrophosphate, $Zr(P_2O_7)_{0.81}$;

$Ba_3Ca_{1.18}Nb_{1.82}O_{8.73}$-$H_2O$;

$Cs_5H_3(SO_4)_4.0.5H_2O$;

a hydrate of $SnCl_2$;

silver iodide tetratungstate $Ag_{26}I_{18}W_4O_{16}$;

KH_2PO_4;

tetraammonium dihydrogen triselenate, $(NH_4)_4H_2(SeO_4)_3$;

$CsDSO_4$;

CsH_2PO_4;

$Sr[Zr_{0.9}Y_{0.1}]O_{3-\delta}$;

a silica-polyphosphate composite containing ammonium ions;

$La_{0.9}Sr_{0.1}Sc_{0.9}Mg_{0.1}O_3$; and

$BaCe_{0.9-x}Zr_xM_{0.1}O_{3-\delta}$ where M is Gd or Nd and x = 0 to 0.4.

79. (previously presented): The component of claim 75, wherein the electronically-insulating proton-conducting coating consists of

$Ba_3Ca_{1.18}Nb_{1.82}O_{8.73}$-$H_2O$;

CsH_2PO_4;

$Sr[Zr_{0.9}Y_{0.1}]O_{3-\delta}$;

polyphosphate composite containing19.96 wt% NH_4^+, 29.3 wt% P, 1.51 wt% Si;

$La_{0.9}Sr_{0.1}Sc_{0.9}Mg_{0.1}O_3$; or

$BaCe_{0.9-x}Zr_xM_{0.1}O_{3-\delta}$ where M is Gd or Nd and x = 0 to 0.4.

80. (previously presented): The component of claim 75, wherein the thickness of the metal or metal hydride is 5-1,000 μm.

81. (previously presented): The component of claim 80, wherein the thickness of the metal or metal hydride is 10-200 μm.

82. (previously presented): The component of claim 75, wherein the area-specific resistance for protons at at least one temperature between 220°C and 550°C is about 0.150 $\Omega.cm^2$..

83. (canceled)

84. (currently amended): A component designed to serve as an electrolyte in a fuel cell, which component comprises

a metal or metal hydride support, wherein

one or both faces of said support is coated with an electronically-insulating proton-conducting coating, which coating consists of an inorganic material that contains no liquid phase, said coating having a thickness such that the ~~conductivity~~ ASR for protons at at least one ~~as a function of~~ temperature between 220°C and 550°C is in the ~~gap shown in Figure 1:~~ range shown for Nafion® 117 in Figure 10:

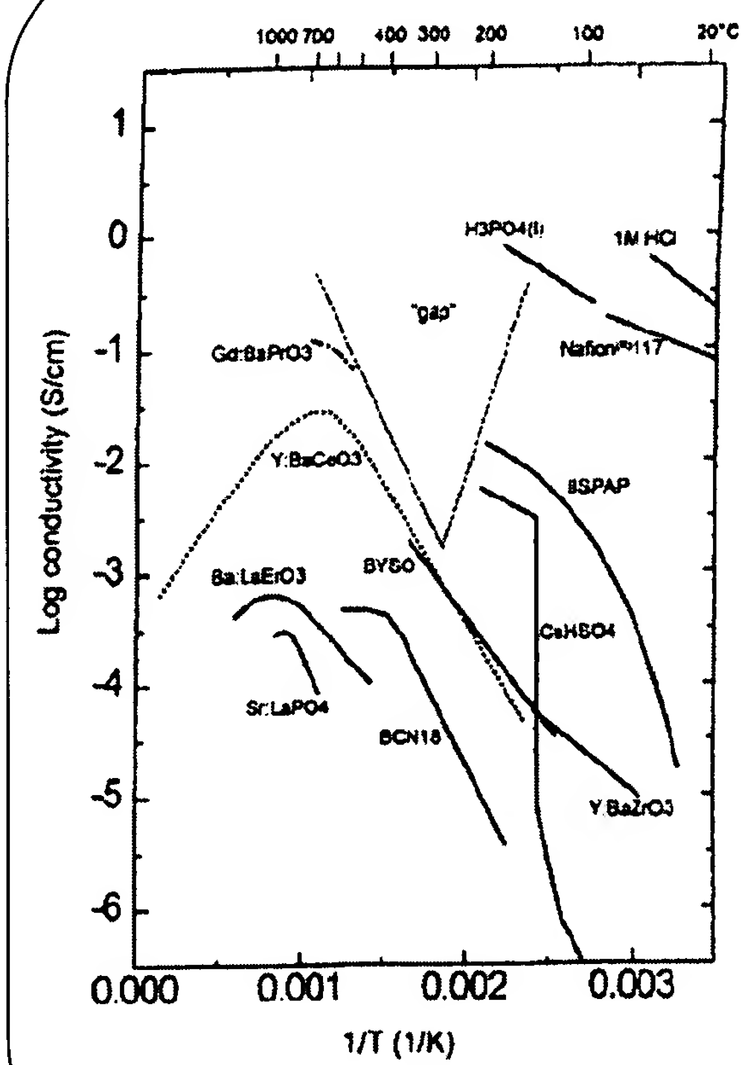

Figure 1

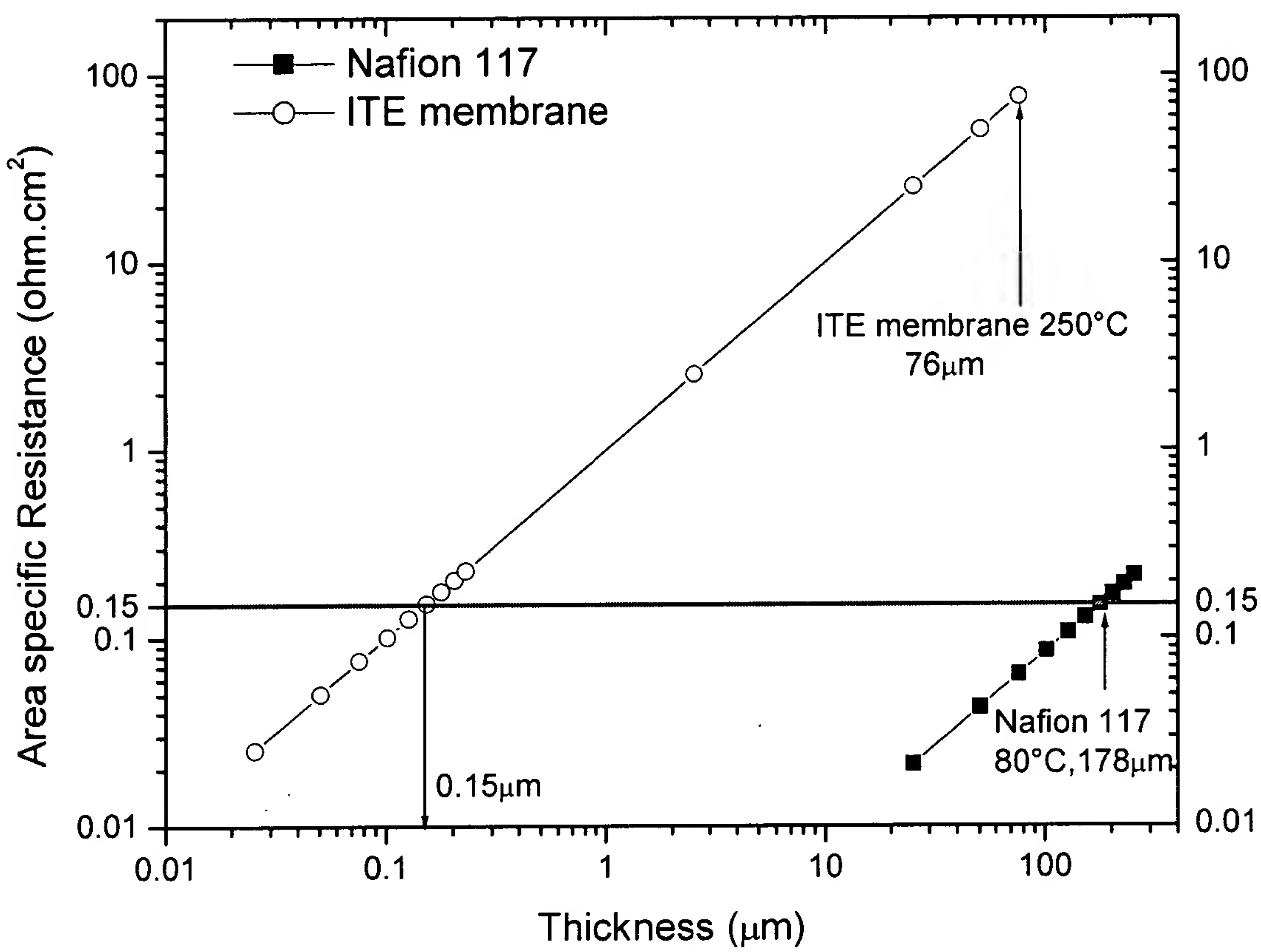

Figure 10.

85. (previously presented): The component of claim 84, wherein the metal or the metal contained in the metal hydride is palladium, titanium, silver, copper, vanadium, lanthanum, nickel, iron, chromium or alloys thereof.

86. (previously presented): The component of claim 85, wherein the metal or metal in the metal hydride is selected from the group consisting of Pd, PdAg, PdCu, Ti, $LaNi_5$, TiFe and CrV_2, V/Ni/Ti, V/Ni and V/Ti.

87. (previously presented): The component of claim 84, wherein the electronically-insulating proton-conducting coating is selected from the group consisting of:

mesoporous zirconium phosphate pyrophosphate, $Zr(P_2O_7)_{0.81}$;

$Ba_3Ca_{1.18}Nb_{1.82}O_{8.73}$-$H_2O$;

$Cs_5H_3(SO_4)_4.0.5H_2O$;

a hydrate of $SnCl_2$;

silver iodide tetratungstate $Ag_{26}I_{18}W_4O_{16}$;

KH_2PO_4;

tetraammonium dihydrogen triselenate, $(NH_4)_4H_2(SeO_4)_3$;

$CsDSO_4$;

CsH_2PO_4;

$Sr[Zr_{0.9}Y_{0.1}]O_{3-\delta}$;

a silica-polyphosphate composite containing ammonium ions;

$La_{0.9}Sr_{0.1}Sc_{0.9}Mg_{0.1}O_3$; and

$BaCe_{0.9-x}Zr_xM_{0.1}O_{3-\delta}$ where M is Gd or Nd and x = 0 to 0.4.

88. (previously presented): The component of claim 84, wherein the electronically-insulating proton-conducting coating consists of

$Ba_3Ca_{1.18}Nb_{1.82}O_{8.73}$-$H_2O$;

CsH_2PO_4;

$Sr[Zr_{0.9}Y_{0.1}]O_{3-\delta}$;

polyphosphate composite containing19.96 wt% NH_4^+, 29.3 wt% P, 1.51 wt% Si;

$La_{0.9}Sr_{0.1}Sc_{0.9}Mg_{0.1}O_3$; or

$BaCe_{0.9-x}Zr_xM_{0.1}O_{3-\delta}$ where M is Gd or Nd and x = 0 to 0.4.

89. (previously presented): The component of claim 84, wherein the thickness of the metal or metal hydride is 5-1,000 μm.

90. (previously presented): The component of claim 89, wherein the thickness of the metal or metal hydride is 10-200 μm.

91. (previously presented): The component of claim 84, wherein the area-specific resistance for protons at at least one temperature between 220°C and 550°C is about 0.150 $\Omega.cm^2$.

92. (canceled)